WHAT IS CLAIMED IS:

1. An isolated and purified polynucleotide comprising a nucleic acid sequence that encodes an amino acid sequence of an SENP1 polypeptide.

2. The isolated and purified polynucleotide of claim 1, comprising at least 15 contiguous nucleotides of SEQ ID NO:1.

3. The isolated and purified polynucleotide of claim 1, comprising at least 30 contiguous nucleotides of SEQ ID NO:1.

4. The isolated and purified polynucleotide of claim 1, comprising at least 100 contiguous nucleotides of SEQ ID NO:1.

5. The isolated and purified polynucleotide of claim 1, comprising the sequence of SEQ ID NO:1.

6. The isolated and purified polynucleotide of claim 1, further defined as encoding at least 10 contiguous amino acids of SEQ ID NO:2.

7. The isolated and purified polynucleotide of claim 1, further defined as encoding the amino acid sequence of SEQ ID NO:2.

8. An expression vector comprising a polynucleotide comprising a nucleic acid sequence encoding at least 10 contiguous amino acids of SEQ ID NO:2.

9. The expression vector of claim 8, wherein the polynucleotide encodes the amino acid sequence of SEQ ID NO:2.

10. The expression vector of claim 8, wherein the expression vector is a viral vector.

11. The expression vector of claim 8, wherein the polynucleotide further comprises a promoter operably linked to the nucleic acid sequence.

12. A recombinant host cell transfected with a polynucleotide comprising a nucleic acid sequence encoding at least 10 contiguous amino acids of SEQ ID NO:2.

13. A process of preparing a SENP1 polypeptide comprising: transfecting a cell with the polynucleotide comprising all or part of the sequence of SEQ ID NO:1 to produce a transformed host cell; and maintaining the transformed host cell under biological conditions sufficient for expression of the polypeptide.

14. A method of identifying a modulator of a SENP1 polypeptide comprising:

(a) contacting the SENP1 polypeptide with a candidate substance; and

(b) assaying whether the candidate substance specifically binds to the SENP1 polypeptide.

15. The method of claim 14, wherein the assaying is done by comparing the activity of the SENP1 polypeptide in the presence and absence of the candidate substance.

16. The method of claim 15, wherein the activity of the SENP1 polypeptide is to remove sentrin from a sentrinized polypeptide.

17. The method of claim 15, wherein the sentrinized polypeptide is PML.

18. An isolated and purified nucleic acid sequence that comprises a region encoding at least 14 contiguous bases identical to, or complementary to, SEQ ID NO:1.

19. The isolated and purified polynucleotide of claim 18, further defined as comprising a region encoding 25 contiguous bases identical or complementary to SEQ ID NO:1.

20. The isolated and purified polynucleotide of claim 19, further defined as encoding the amino acid sequence of SEQ ID NO:2.

21. An isolated and purified polynucleotide comprising a nucleic acid sequence that encodes an amino acid sequence of an SENP2 polypeptide.

22. The isolated and purified polynucleotide of claim 21, comprising at least 15 contiguous nucleotides of SEQ ID NO:7.

23. The isolated and purified polynucleotide of claim 21, comprising at least 100 contiguous nucleotides of SEQ ID NO:7.

24. The isolated and purified polynucleotide of claim 21, comprising the sequence of SEQ ID NO:7.

25. The isolated and purified polynucleotide of claim 21, further defined as encoding at least 10 contiguous amino acids of SEQ ID NO:8.

26. The isolated and purified polynucleotide of claim 21, further defined as encoding the amino acid sequence of SEQ ID NO:8.

27. An expression vector comprising a polynucleotide comprising a nucleic acid sequence encoding at least 10 contiguous amino acids of SEQ ID NO:8.

28. A recombinant host cell transfected with a polynucleotide comprising a nucleic acid sequence encoding at least 10 contiguous amino acids of SEQ ID NO:8.

29. A process of preparing a SENP2 polypeptide comprising: transfecting a cell with the polynucleotide comprising all or part of the sequence of SEQ ID NO:7 to produce a transformed host cell; and maintaining the transformed host cell under biological conditions sufficient for expression of the polypeptide.

30. A method of identifying a modulator of a SENP2 polypeptide comprising:

(a) contacting the SENP2 polypeptide with a candidate substance; and

(b) assaying whether the candidate substance specifically binds to the SENP2 polypeptide.

31. An isolated and purified nucleic acid sequence that comprises a region encoding at least 14 contiguous bases identical to, or complementary to, SEQ ID NO:7.

32. The isolated and purified polynucleotide of claim 31, further defined as encoding the amino acid sequence of SEQ ID NO:8.

33. An isolated and purified polynucleotide comprising a nucleic acid sequence that encodes an amino acid sequence of an SENP3 polypeptide.

34. The isolated and purified polynucleotide of claim 33, comprising at least 15 contiguous nucleotides of SEQ ID NO:9.

35. The isolated and purified polynucleotide of claim 33, comprising at least 100 contiguous nucleotides of SEQ ID NO:9.

36. The isolated and purified polynucleotide of claim 33, comprising the sequence of SEQ ID NO:9.

37. The isolated and purified polynucleotide of claim 33, further defined as encoding at least 10 contiguous amino acids of SEQ ID NO:10.

38. The isolated and purified polynucleotide of claim 33, further defined as encoding the amino acid sequence of SEQ ID NO:10.

39. An expression vector comprising a polynucleotide comprising a nucleic acid sequence encoding at least 10 contiguous amino acids of SEQ ID NO:10.

40. A recombinant host cell transfected with a polynucleotide comprising a nucleic acid sequence encoding at least 10 contiguous amino acids of SEQ ID NO:10.

41. A process of preparing a SENP3 polypeptide comprising: transfecting a cell with the polynucleotide comprising all or part of the sequence of SEQ ID NO:9 to produce a transformed host cell; and maintaining the transformed host cell under biological conditions sufficient for expression of the polypeptide.

42. A method of identifying a modulator of a SENP3 polypeptide comprising:

(a) contacting the SENP3 polypeptide with a candidate substance; and

(b) assaying whether the candidate substance specifically binds to the SENP3 polypeptide.

43. An isolated and purified nucleic acid sequence that comprises a region encoding at least 14 contiguous bases identical to, or complementary to, SEQ ID NO:9.

44. The isolated and purified polynucleotide of claim 43, further defined as encoding the amino acid sequence of SEQ ID NO:10.